REMARKS

As a result of the foregoing amendments, a total of 20 claims are now pending in the present application. The foregoing amendments are presented in response to the Office Action mailed April 4, 2007, wherefore reconsideration of this application is requested.

By way of the above-noted amendments, claims 1, 7-8, 14 and 16-17 have been amended to more clearly define features of the present invention. More particularly, claims 1, 7-8 and 16-7 have been amended to provide an explicit definition of the term "optical spike", and further to define that each component of the spike signal has a respective frequency and phase, and further that dispersion of the link causes the components to be phase aligned at the desired location of the spike. Claim 6 has been amended to correct its dependency. Clarifying amendments have been made in claims 3, 5 and 14 to remove ambiguity. New dependent claim 20 has been introduced to define further features of the present inventions which are believed to be patentable.

Finally, paragraphs 26 and 27 (following the number of the application as published) of the specification have been amended to correctly reference figures 3a-h and 4a-c.

It is emphasized that the foregoing amendments are intended solely to clarify the meaning of terms of the claims. No surrender of subject matter is expressed or implied by these amendments. In preparing the above-noted amendments, careful attention has been paid to ensure that, no new subject matter has been introduced as a result of the foregoing amendments.

Referring now to the text of the Office Action:

- claims 3-6 are objected to;
- claims 1-19 -stand rejected under 35 U.S.C. § 112, second paragraph ;
- claims 1, 2, 5, 7-9, and 16-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teaching of United States Patent No. 6,574,389 (Schemmann et al) in view of United States Patent No. 6,118,566 (Price et al.); and

- claims 3, 4, 6, 10-15 and 19 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent for including all of the limitations of the base claim and any intervening claims.

As an initial matter, Applicant appreciates the Examiner's indication of allowable subject matter in claims 3, 4, 6, 10-15 and 19. The Examiner's various objections to the claims are believed to be fully traversed by way of the above-noted claim amendments, and further in view of the following discussion.

Objections to claims 3-6

The Examiner has objected to the term "designed" in claims 3 and 5. It is believed that the Examiner's objections are fully addressed by way of the above-noted amendments in claims 3 and 5.

Objections under 35 U.S.C. § 112, Second paragraph

The Examiner's objections are not understood, and therefore further clarification is courteously requested. For example, with reference to claim 1, the Examiner objects that:

> "…'a spike signal having a plurality of components, an initial phase relationship between the components being selected such that the components will be phased aligned at the selected location' is undefined. What a spike signal is defined. What the components are defined. How to generate a spike signal having a plurality of components. How the components will be phased aligned at the selected location."[sic]

Similar objections are raised with reference to claims 7, 8, 16 and 17. With respect, the foregoing objections are so garbled as to be unintelligible. Applicant is uncertain whether the Examiner is asserting that the terms "a spike signal" "a plurality of components" and "the components" are defined, or need to be defined.

Notwithstanding the foregoing uncertainty regarding the Examiner's objections, Applicant is of the view that the person of ordinary skill in the art will have no difficulty understanding the meaning of the originally filed claims. The above noted amendments are intended to provide even more clarity, primarily for the benefit of the Examiner's understanding. In particular: claims 1, 7, 8, 16 and 17 have been amended to explicitly define that:

- the "optical spike" is a "localized increase in peak optical intensity relative to the RMS optical intensity".
- each of the components of the spike signal has a respective frequency and phase; and
- dispersion of the optical link causes the components to be phase aligned at the desired location of the optical spike.

Furthermore, since the claims define that a spike signal is launched into the link and its "plurality of components" will be phase aligned at the selected location of the optical spike, the person or ordinary skill in the art will immediately and without difficulty understand that the term "a spike signal" can only refer to a signal which is launched into the optical link in order to generate the optical spike at the desired location. Precisely how the spike signal is generated is not germane to the present invention, and so Applicant is under no obligation to claim it. What is important – and thus what is claimed - is that the structure of the spike signal (i.e. a plurality of components having respective frequency and phase, and an initial phase relationship between the components) is selected such that dispersion of the link causes an optical spike to appears at the desired location within the optical link. Applicant is of the view that the present claims fully and properly define these elements of the present invention.

In light of the foregoing, it is believed that the present claims clearly and distinctly define the subject matter of the present invention, as required by 35 U.S.C. § 112. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 112 is believed to be in order, and such action is courteously requested.

Claim rejections under 35 USC 103(a)

At paragraph 6 of the Detailed action, the Examiner states that "the rejection based on the examiner best understood the language of the claims" [sic]. Applicant respectfully believes that, given the nature of the Examiner's rejections under 35 U.S.C. § 112, and the above-noted difficulties with those rejections, the Examiner's further rejections under 35 U.S.C. § 103 should properly be withdrawn until the examiner has been able to understand the presently claimed invention.

However, with specific reference to the issues raised on section 6 of the Detailed action, the Applicant notes the following:

United States Patent No. 6,574,389 (Schemmann et al) teaches an optical transmitter in which known RF filter circuits having a frequency-dependent response can be used to compensate chromatic dispersion of a link. According to Schemmann et al., an input RF signal 110 is processed through RF filter circuits of the precompensator 111, to thereby generate the distorted electric signal 120. The distortions imposed b the precompensator 111, are designed to compensate odd and even order distortions in the optical link.

United States Patent No. 6,118,566 (Price et al.) teaches another optical transmitter in which known RF filter circuits having a frequency-dependent response can be used to compensate chromatic dispersion of a link.

The person of ordinary skill in the art will recognise that, at best, the systems of Schemmann et al. and Price et al can predistort an input RF signal to compensate chromatic dispersion of an optical link, so that a low-distortion optical signal is obtained at the receiver. However, the person of ordinary skill in the art will also instantly recognise that a low distortion optical signal at the receiver, and an optical spike at any arbitrarily selected location, are two entirely different things, and not in any way similar.

With particular to claim 1, the person of ordinary skill in the art will instantly, and without difficulty recognise that:

- neither Schemmann et al, nor Price et al. even remotely contemplate generating an optical spike anywhere in an optical system, much less at an arbitrarily selected location;
- neither of Schemmann's distorted electric signal 120 and Price's distorted electric signal ΛeD are remotely similar to the claimed spike signal, for at least the reason that nether are capable of generating an optical spike anywhere in the link, and

neither reference provides any teaching or suggestion that such an operation is even possible, much less how to do it; and

- the systems of Schemmann et al and Price et al are utterly incapable of generating a spike signal as defined by the present claims.

With particular to claim 7, in addition to the above differences, neither reference teaches or suggest anything equivalent to the claimed steps of "scanning a position of the optical spike between transmitter and receiver ends of the link, and, while scanning the position of the optical spike, monitoring an optical power level at the receiver end of the link".

With particular to claim 16, in addition to the above differences, neither reference teaches or suggest anything equivalent to the claimed method of controlling a selected one of a plurality of optical components in an optical link, in which an optical spike is generated proximal the selected optical element.

Thus it is believed that the presently claimed invention is clearly distinguishable over the teaching of United States Patent No. 6,574,389 (Schemmann et al) in view of United States Patent No. 6,118,566 (Price et al.) Accordingly, reconsideration and withdrawal of the rejections under 35 USC 103(a) is believed to be in order, and such action is courteously requested.

In light of the foregoing, it is believed that the present invention is in good condition for allowance, and early action in that respect is courteously solicited.

If any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this response, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 19-5113.

Respectfully submitted,
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Date: August 2, 2007

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